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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,537	12/29/2000	Thomas P. Glenn	M-8933 US	7447

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EXAMINER

VARGOT, MATHIEU D

ART UNIT PAPER NUMBER

1732

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/757,537

Applicant(s)

GLENN et al.

Examiner

H. VARGOT

Group Art Unit

1732

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-38 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-38 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other: _____

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1. Claims 24-29 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24, line 8, "said molding die" lacks antecedent basis and it should be clearly specified what in claim 24 constitutes the molding die. Also, in claim 38, "said roller" in the last line lacks antecedent basis and would appear to not even be encompassed by the injection molding embodiment set forth in independent claim 35. Clarification is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

Claims 1, 3, 5, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Korenaga et al (see column 7, lines 1-11).

Korenaga et al discloses the instant molding die and method for making such die for molding an integrated optical circuit (see col. 1, lines 15 and 25-26) by providing a substrate (20) having a first patterned surface, the substrate being made of silicon carbide and providing a protective noble metal alloy film over the surface of the substrate to provide an outer second surface which is a negative of the IOC/waveguide to be molded using the die. See Figures 2a-2c.

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 14 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korenaga et al.

Korenaga et al discloses the basic claimed die and process of making same as set forth in paragraph 2, supra, lacking a clear disclosure of the exact shape of the first patterned surface, that the metal protective film on the die is made of nickel or titanium and the holding substrate of instant claim 24. It is submitted that the exact shape of the pattern to be produced would have been an obvious feature dependent on the exact integrated circuit desired and that the exact metal used for the protective film would have been an obvious material selection in the process and die of the applied reference dependent on hardness desired for the die. It is further noted that substrates to hold material to be embossed are well known in the art and such would have been an obvious expedient in the process of Korenaga et al to ensure that the moldable first material is accurately embossed. While Korenaga et al does not explicitly teach a curable first material, the second one certainly is and one of ordinary skill in the art would have found employing a first curable material as obvious dependent on the exact function and utility for the IOC.

4. Claims 6-11, 15-23 and 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korenaga et al in view of Heming et al (col. 11, lines 54-61).

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The primary reference discloses the basic claimed tool, method of making same and method of compression molding using said tool or die, Korenaga et al lacking essentially that the tool/die is provided on a roller and that the substrate of the tool/die would be bent so that it would be conformed to the surface of the roller. Heming et al discloses making waveguides by using a roll embossing process wherein the necessary structures to be imparted to the substrate are clearly contained on the surface of a roller. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the embossing in the primary reference as roller embossing as taught by Heming et al for a continuous processing. The processing to make the individual dies as set forth in instant claim 21 is well known in the art (ie, etching and cutting a wafer into a plurality of parts) and such would have been an obvious feature in the combination as applied to in fact make a number of dies which would fit around the circumference of a roller.

5. Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korenaga et al in view of Knapp (see Fig. 4).

The primary reference discloses the basic claimed process as set forth in the paragraphs supra, Korenaga et al essentially lacking a teaching of molding the first material using the die in an injection molding operation. Knapp teaches making waveguides by injection molding and such would have been an obvious expedient over the embossing of the primary reference dependent on the exact first material desired for the waveguide.

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6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chandross et al discloses making integrated optical circuits involving embossing waveguides into substrates.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Vargot whose telephone number is 703 308-2621.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

M. Vargot

September 6, 2003

M. Vargot
MATHIEU D. VARGOT
PRIMARY EXAMINER
GROUP 1300

9/6/03